Watches and Warnings Vector Products - v2

Domain Portfolio: Weather Imagery | Domain: Alerts | API Name:Watches and Warnings - v2

Geography: Global **Attribution Required:** NO **Attribution Requirements:** N/A

Overview

The Feature Data Service (FDS) API provides geographic features for a number of products. The client can use these features to render a visual representation of data.

- FDS provides geometric vector data where each feature can be a set of points, a polygon or set of polygons, a linestring or set of linestrings, or any other valid GeoJSON type
- Each feature is described by a set of geographic coordinates and a set of properties.
- Each feature is uniquely identified by the *combination* of its product key, feature key and valid time; the valid time is used to assign the feature to a unique feature set.
- For additional details about FDS, please see the Weather Company Data | Data Visualization - Weather Imagery | Common Usage Guide

Using FDS products requires a multi-step workflow to retrieve the necessary data for the specific product data request. Step 2 requires the **'time'** value parameter, found in the response from Step 1.

- **Step 1:** Get Product Info - Provides time-based labels for the feature sets that are currently available.
- **Step 2:** Get Features for a Single Tile - Provides all geographic features for a single tile, taken from a single feature set within a specific product.

HTTP Headers and Data Lifetime - Caching and Expiration

For details on appropriate header values as well as caching and expiration definitions, please see **The Weather Company Data | API Common Usage Guide.**

URL Construction

Step 1: Get Product Info
Required Parameters: **productKey,** apiKey=**yourApiKey** **||** **Optional Parameters:** meta, max-times https://api.weather.com/v2/vector-api/products/**<productKey>**/info?**apiKey=yourApiKey**
The [**/products/{productKey}/info**] request provides the labels for the feature sets that are currently available. These labels are required as input for the subsequent [**/products/{productKey}/features**] request, and they are invoked in that request's **'time'** parameter.
https://api.weather.com/v2/vector-api/products/643/info?meta=true&max-times=12&apiKey=yourApiKey
Step 2: Get Features for a Single Tile
Required Parameters: **productKey, time, lod, x, y,** apiKey=**yourApiKey** **||** **Optional Parameters:** declutter, tile-size https://api.weather.com/v2/vector-api/products/**<productKey>**/features?time=**<time>**&lod=**<lod>**&x=**<x>**&y=**<y>**&**apiKey=yourApiKey**
The [**/products/{productKey}/features**] request provides a set of features for a single tile, from a particular feature set within a particular product. Each feature contains a small set of key metadata properties, including its ID and valid time, which are required as input for any subsequent [**/products/{productKey}/feature-details**] request, as the **'feature-id'** and **'valid-time'** parameters.
https://api.weather.com/v2/vector-api/products/643/features?time=1492016701805&lod=10&x=175&y=409&tile-size=256&apiKey=yourApiKey

Product Data Dictionary: Watches and Warnings Vector Products

Watches & Warnings have product numbers from 607 to 647, as shown below.

NOTE that not all product numbers in this range are assigned to this use.

NOTE that the alert coverage provided in the **Global** products is limited to those countries with which The Weather Company has an association. A list of those countries can be found in the documentation for **TWC V3 Weather Alerts Headlines API**.

	Severe	Flood	Marine	Winter	Tropical	Other
US	608	609	607	610	612	611
Canada	619	621	630	620	623	622
Europe	628	626	624	625	629	627
Japan	640	639*	637	638	-	641
Global	643	644	642	645	647	646

* 639 is **Japan Flood/Rain**

The provider of the watches and warnings data is The Weather Company's V3 **Weather Alert Detail API**, which provides details for weather watches, warnings, statements, and advisories issued by organizations such as the National Weather Service (NWS), Environment Canada, and MeteoAlarm.

Each alert's subject event is encoded by the combination of its **phenomena** and **significance** values, and the combination may vary depending on the issuing organization, as shown in the example below.

phenomena	significance	Subject Event (Issuing Organization)
TO	A	Tornado Watch (NWS)
TO	W	Tornado Warning (NWS)
tornado	A	Tornado Watch (Environment Canada)
tornada	W	Tornado Watch (Environment Canada)

Events and their encodings, along with alert classifications and a threat-level color scheme, are found in the documentation for the **TWC V3 Weather Alerts Detail API**.

For each product, the JSON data includes the following fields:

Field *Found in the GeoJSON response, in each feature's **properties** field*	**Description**
adminDistrict	Administrative district name for the subject event's location Ex. Montana
adminDistrictCode	Administrative district code for the subject event's location Ex. MT
alert_details_api	URL for accessing the relevant record in the V3 Weather Alerts Detail API, employing the **detailKey** property as the value for the **alertId** query parameter Ex. https://api.weather.com/v3/alerts/detail?alertId=77128ec9-cebe-46b2-8d72-d1f6860454e7&apiKey={apiKey}&format=json&language=en-US
areaId	Code for the alert's location Ex. MTC035
areaName	Mixed-case name for the alert's location Ex. Glacier
areaTypeCode	Type for the alert's location • **C:** county • **CLC:** Canada location • **Z:** zone
categories	An array of JSON objects categorizing the alert's subject event, where each object contains the following properties **category** • **Geo:** geophysical, including landslide • **Met:** meteorological, including flood • **Safety:** General emergency and public safety • **Security:** Law enforcement, military, homeland, and local/private security

	• **Rescue:** Rescue and recovery • **Fire:** Fire suppression and rescue • **Health:** Medical and public health • **Env:** Environmental, including pollution • **Transport:** Public and private transportation • **Infra:** Utility, telecommunication, and other non-transportation infrastructure • **CBRNE:** Chemical, Biological, Radiological, Nuclear, or High-Yield Explosive threat or attack • **Other** **categoryCode** • **1:** Geo • **2:** Met • **3:** Safety • **4:** Security • **5:** Rescue • **6:** Fire • **7:** Health • **8:** Env • **9:** Transport • **10:** Infra • **11:** CBRNE • **12:** Other
certainty	Certainty text for the alert's subject event • **Observed:** Determined to have occurred or to be ongoing • **Likely:** p > ~50% • **Possible:** possible but not likely; p ≤ ~50% • **Unlikely:** not expected to occur; p ~ 0% • **Unknown**
certaintyCode	Certainty code for the alert's subject event, matching the definitions above • **1:** Observed • **2:** Likely • **3:** Possible • **4:** Unlikely • **5:** Unknown

countryCode	Country code for the alert’s location Ex. US
countryName	Country name for the alert’s location Ex. UNITED STATES OF AMERICA
detailKey	Detail record key for the alert, identical to the **alertId** query parameter used in calls to the V3 Weather Alerts Detail API Ex. 77128ec9-cebe-46b2-8d72-d1f6860454e7
disclaimer	Disclaimer for the alert’s data
effectiveTimeLocal	Effective date and time for the alert’s information, in local time Ex. 2017-10-07T12:30:00-05:00
effectiveTimeLocalTimeZone	Time zone abbreviation for the effective time Ex. EDT
eventDescription	Description of the alert’s subject event Ex. Tornado Warning
eventTrackingNumber	Tracking number for the alert’s subject event; a four-digit number or a checksum Ex. 160
expireTimeLocal	Expiry date and time for the alert’s information, in local time Ex. 2017-10-07T19:30:00-05:00
expireTimeLocalTimeZone	Time zone abbreviation for the expiry time Ex. EDT

expireTimeUTC	Expiry date and time, in UTC Ex. 1373914800
flood	A JSON object with the following properties **floodCrestTimeLocal** Ex. 2017-10-07T21:30:00-05:00 **floodCrestTimeLocalTimeZone** Ex. EDT **floodEndTimeLocal** Ex. 2017-10-07T23:30:00-05:00 **floodEndTimeLocalTimeZone** Ex. EDT **floodImmediateCause** ● **Excessive Rainfall** ● **Snowmelt** ● **Rain and Snowmelt** ● **Dam or Levee Failure** ● **Ice Jam** ● **Glacier-Dammed Lake Outburst** ● **Rain and/or Snowmelt and/or Ice Jam** ● **Upstream Flooding plus Storm Surge** ● **Upstream Flooding plus Tidal Effects** ● **Elevated Upstream Flow plus Tidal Effects** ● **Wind and/or Tidal Effects** ● **Upstream Dam or Reservoir Release** ● **Other Multiple Causes** ● **Other Effects** ● **Unknown**

	floodImmediateCauseCode ● **ER:** Excessive Rainfall ● **SM:** Snowmelt ● **RS:** Rain and Snowmelt ● **DM:** Dam or Levee Failure ● **IJ:** Ice Jam ● **GO:** Glacier-Dammed Lake Outburst ● **IC:** Rain and/or Snowmelt and/or Ice Jam ● **FS:** Upstream Flooding plus Storm Surge ● **FT:** Upstream Flooding plus Tidal Effects ● **ET:** Elevated Upstream Flow plus Tidal Effects ● **WT:** Wind and/or Tidal Effects ● **DR:** Upstream Dam or Reservoir Release ● **MC:** Other Multiple Causes ● **OT:** Other Effects ● **UU:** Unknown **floodLocationId** Ex. SMBM8 **floodLocationName** Ex. Saint Mary River at International Boundary **floodRecordStatus** ● **A record flood is not expected** ● **Near record or record flood expected** ● **Flood without a period of record to compare** ● **For areal flood warnings, areal flash flood products, and flood advisories (point and areal)** **floodRecordStatusCode** ● **NO:** A record flood is not expected ● **NR:** Near record or record flood expected ● **UU:** Flood without a period of record to compare ● **OO:** For areal flood warnings, areal flash flood products, and flood advisories (point and areal)

	floodSeverity ● **None** ● **N/A** ● **Minor** ● **Moderate** ● **Major** ● **Unknown** **floodSeverityCode** ● **N:** None ● **0:** N/A ● **1:** Minor ● **2:** Moderate ● **3:** Major ● **U:** Unknown **floodStartTimeLocal** Ex. 2017-10-07T20:30:00-05:00 **floodStartTimeLocalTimeZone** Ex. EDT
headlineText	Headline text for the alert Ex. Flood Warning until 12:30PM CDT SAT
identifier	Checksum value used to uniquely identify the alert Ex. a463d8adbd563a981673b1beab2b04994e80078a
issueTimeLocal	Date and time the alert was issued, in local time Ex. 2017-10-07T11:30:00-05:00
issueTimeLocalTimeZone	Time zone abbreviation for the issue time

	Ex. CDT
latitude	Latitude of the subject event’s centroid location Ex. 48.65
longitude	Longitude of the subject event’s centroid location Ex. -113.13
messageType	Nature of the alert message ● **New:** Provides initial information ● **Update:** Updates an existing message ● **Cancel:** Cancels an earlier message
messageTypeCode	Message type code, matching the definitions above ● **1:** New ● **2:** Update ● **3:** Cancel
officeAdminDistrict	Administrative district name for the alert’s issuing office Ex. Montana
officeAdminDistrictCode	Administrative district code for the alert’s issuing office Ex. MT
officeCode	Code for the alert’s issuing office Ex. KTFX
officeCountryCode	Country code for the alert’s issuing office Ex. US
officeName	Name for the alert’s issuing office

	Ex. Great Falls
onsetTimeLocal	Onset date and time for the alert's information, in local time; **Canada only** Ex. 2017-10-07T17:30:00-05:00
onsetTimeLocalTimeZone	Time zone abbreviation for the onset time Ex. EDT
phenomena	Phenomena code for the alert's subject event Ex. TO
pollDateTime	Date and time in which the alert was marked by the system's periodic polling process; this value is subsequently used as the **valid-time** for the feature associated with the alert
processTimeUTC	Process time for the alert, for the source TWC system, in UTC Ex. 1475863030000
productIdentifier	Product line identifier Ex. TOR
responseTypes	An array of JSON objects describing the action(s) recommended for the alert's target audience, where each object contains the following properties **responseType** ● **Shelter:** Take shelter in place or take shelter as instructed ● **Evacuate:** Relocate as instructed ● **Prepare:** Make preparations as instructed ● **Execute:** Execute a pre-planned activity as instructed ● **Avoid:** Avoid the subject event as instructed ● **Monitor:** Attend to information sources as instructed ● **Assess:** Evaluate the information in this message; **NOTE** that this value SHOULD NOT be used in public warning applications ● **AllClear:** The subject event no longer poses a threat or concern; take follow-on actions as instructed

	• **None:** No action recommended **responseTypeCode** • **1:** Shelter • **2:** Evacuate • **3:** Prepare • **4:** Execute • **5:** Avoid • **6:** Monitor • **7:** Assess • **8:** AllClear • **9:** None **NOTE** that the responses relate to further instructions, which are found in the relevant alert in the V3 Weather Alerts Detail API. This record key for the alert is found in the **detailKey** property, and the alert can be accessed with the URL found in the **alert_details_api** property. The instructions are found in the JSON response to the API call, specifically in **texts[i].instruction**, that is, the **instruction** property within each JSON object in the **texts** array. The **responseTypes** array and this **texts** array are synchronized, so that any instructions found in **texts[x]** relate to the response in **responseTypes[x]**. Each **instruction** property may be **null**, in which case the response requires no further instructions.
severity	Severity of the alert's subject event • **Extreme:** Extraordinary threat to life or property • **Severe:** Significant threat to life or property • **Moderate:** Possible threat to life or property • **Minor:** Minimal to no known threat to life or property • **Unknown:** Severity unknown
severityCode	Severity code for the alert's subject event, matching the definitions above • **1:** Extreme • **2:** Severe • **3:** Moderate • **4:** Minor • **5:** Unknown

significance	Significance code for the alert's subject event Often, but not always, the significance codes have the following meanings. ● **A:** wAtch ● **B:** Bulletin ● **E:** Emergency ● **M:** Message ● **L:** aLert ● **O:** Outlook ● **S:** Statement ● **W:** Warning ● **Y:** advisorY
source	Originating source of the alert
urgency	Urgency text for the alert ● **Immediate:** Responsive action SHOULD be taken immediately ● **Expected:** Responsive action SHOULD be taken soon (within the next hour) ● **Future:** Responsive action SHOULD be taken in the near future ● **Past:** Responsive action is no longer required ● **Unknown:** Urgency not known
urgencyCode	Urgency code for the alert, matching the definitions above ● **1:** Immediate ● **2:** Expected ● **3:** Future ● **4:** Past ● **5:** Unknown